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**From:** Beck, Nancy [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=168ECB5184AC44DE95A913297F353745-BECK, NANCY]  
**Sent:** 6/22/2017 10:26:41 PM  
**To:** Strauss, Linda [Strauss.Linda@epa.gov]; Cleland-Hamnett, Wendy [Cleland-Hamnett.Wendy@epa.gov]; Morris, Jeff [Morris.Jeff@epa.gov]; Wise, Louise [Wise.Louise@epa.gov]; Schmit, Ryan [schmit.ryan@epa.gov]; Pierce, Alison [Pierce.Alison@epa.gov]  
**Subject:** RE: ORD + OCSPP ACTION: ABC Darwin re: PFAS

My eyes may be tired, but I'm not seeing the language I highlighted below on the web link provided.

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Nancy B. Beck, Ph.D., DABT  
Deputy Assistant Administrator, OCSPP  
P: 202-564-1273  
M: 202-731-9910  
[beck.nancy@epa.gov](mailto:beck.nancy@epa.gov)

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**From:** Strauss, Linda  
**Sent:** Thursday, June 22, 2017 6:16 PM  
**To:** Beck, Nancy <Beck.Nancy@epa.gov>; Cleland-Hamnett, Wendy <Cleland-Hamnett.Wendy@epa.gov>; Morris, Jeff <Morris.Jeff@epa.gov>; Wise, Louise <Wise.Louise@epa.gov>; Schmit, Ryan <schmit.ryan@epa.gov>; Pierce, Alison <Pierce.Alison@epa.gov>  
**Subject:** Fwd: ORD + OCSPP ACTION: ABC Darwin re: PFAS

Thanks, Alison! Nancy, does this do it for you to be able to send the response? I haven't read what Alison sent yet. Linda

Sent from my iPhone

Begin forwarded message:

**From:** "Pierce, Alison" <[Pierce.Alison@epa.gov](mailto:Pierce.Alison@epa.gov)>  
**Date:** June 22, 2017 at 6:00:28 PM EDT  
**To:** "Strauss, Linda" <[Strauss.Linda@epa.gov](mailto:Strauss.Linda@epa.gov)>  
**Subject:** RE: ORD + OCSPP ACTION: ABC Darwin re: PFAS

Linda –

Per discussion, these should help. Please let me know if you need more.

**Relevant links:**

Nancy had a concern about whether this is a new recommendation – we have made this recommendation publically before, and it can be found here: <https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/risk-management-and-polyfluoroalkyl-substances-pfass#tab-2>

While we don't have language on the distinction between long and short chemicals, we do have some on why we're concerned with long chain PFAS: <https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/risk-management-and-polyfluoroalkyl-substances-pfass#tab-1>

Not as relevant, but may be of interest to the reporter, here's an article from the Air Force on what it's doing:

<http://www.af.mil/News/Article-Display/Article/915057/af-awards-replacement-firefighting-foam-contract/>

**Here's the answer, amended to reflect previous edits and include those links:**

Aqueous film form foam (AFFF) that contain PFAS chemicals are typically used to extinguish highly flammable or combustible liquid Class B fires, such as fires involving gas tankers and oil refineries. The biggest users of AFFF are in the U.S. military, petrochemical, and aviation industries. While the majority of AFFF is being manufactured using primarily telomer-based short-chain PFAS substances, there is continued use of existing stocks of products which contain long-chain chemicals. In addition, a few companies continue to manufacture (including import) AFFF with long-chain PFAS chemicals. [Read more about why EPA is concerned about long-chain PFASs here.](#)

PFAS chemicals are persistent and can contaminate groundwater. EPA encourages the use of training foams that are available which simulate AFFF without containing PFAS chemicals, and restricting AFFF use for emergencies only, as the Air Force has done. In addition, when AFFF is used, it is a good idea to remove and destroy foam residue before contamination can occur. [That recommendation and further background can be found here.](#)

ALISON PIERCE  
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*Washington, DC 20460 USA*

[PIERCE.ALISON@EPA.GOV](mailto:PIERCE.ALISON@EPA.GOV)  
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**From:** Strauss, Linda  
**Sent:** Thursday, June 22, 2017 5:38 PM  
**To:** Pierce, Alison <[Pierce.Alison@epa.gov](mailto:Pierce.Alison@epa.gov)>  
**Subject:** RE: ORD + OCSPP ACTION: ABC Darwin re: PFAS

Need to go home. Will look for it later tonight. Thanks, Alison.

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**From:** Pierce, Alison  
**Sent:** Thursday, June 22, 2017 5:36 PM  
**To:** Strauss, Linda <[Strauss.Linda@epa.gov](mailto:Strauss.Linda@epa.gov)>; Morris, Jeff <[Morris.Jeff@epa.gov](mailto:Morris.Jeff@epa.gov)>; Beck, Nancy <[Beck.Nancy@epa.gov](mailto:Beck.Nancy@epa.gov)>  
**Cc:** Cleland-Hamnett, Wendy <[Cleland-Hamnett.Wendy@epa.gov](mailto:Cleland-Hamnett.Wendy@epa.gov)>; Doa, Maria <[Doa.Maria@epa.gov](mailto:Doa.Maria@epa.gov)>  
**Subject:** RE: ORD + OCSPP ACTION: ABC Darwin re: PFAS

Just got some links from CCD. Will be sending your way shortly after I have a chance to clean up.

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*U.S. Environmental Protection Agency*  
*1200 Pennsylvania Ave., N.W.*

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**From:** Strauss, Linda  
**Sent:** Thursday, June 22, 2017 5:36 PM  
**To:** Morris, Jeff <[Morris.Jeff@epa.gov](mailto:Morris.Jeff@epa.gov)>; Beck, Nancy <[Beck.Nancy@epa.gov](mailto:Beck.Nancy@epa.gov)>  
**Cc:** Cleland-Hamnett, Wendy <[Cleland-Hamnett.Wendy@epa.gov](mailto:Cleland-Hamnett.Wendy@epa.gov)>; Pierce, Alison <[Pierce.Alison@epa.gov](mailto:Pierce.Alison@epa.gov)>; Doa, Maria <[Doa.Maria@epa.gov](mailto:Doa.Maria@epa.gov)>  
**Subject:** RE: ORD + OCSPP ACTION: ABC Darwin re: PFAS

Any word on this?

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**From:** Morris, Jeff  
**Sent:** Thursday, June 22, 2017 12:58 PM  
**To:** Beck, Nancy <[Beck.Nancy@epa.gov](mailto:Beck.Nancy@epa.gov)>  
**Cc:** Strauss, Linda <[Strauss.Linda@epa.gov](mailto:Strauss.Linda@epa.gov)>; Cleland-Hamnett, Wendy <[Cleland-Hamnett.Wendy@epa.gov](mailto:Cleland-Hamnett.Wendy@epa.gov)>; Pierce, Alison <[Pierce.Alison@epa.gov](mailto:Pierce.Alison@epa.gov)>; Doa, Maria <[Doa.Maria@epa.gov](mailto:Doa.Maria@epa.gov)>  
**Subject:** Re: ORD + OCSPP ACTION: ABC Darwin re: PFAS

I'm copying Maria, as I believe we have made this recommendation previously but I don't know what's on the web or otherwise in the public domain.

Sent from my iPad

On Jun 22, 2017, at 12:53 PM, Beck, Nancy <[Beck.Nancy@epa.gov](mailto:Beck.Nancy@epa.gov)> wrote:

Regarding this sentence: EPA encourages the use of training foams that are available which simulate AFFF without containing PFAS chemicals, and restricting AFFF use for emergencies only, as the Air Force has done. In addition, when AFFF is used, it is a good idea to ~~to treat the response scene as a hazardous site, and remove and destroy foam residue before contamination can occur. as the Air Force has done.~~

Have we made these recommendations before and they are somewhere on the web. Can we link to those pages? I would be a bit nervous if these are new recommendations.

Thanks.

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Nancy B. Beck, Ph.D., DABT  
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[beck.nancy@epa.gov](mailto:beck.nancy@epa.gov)

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**From:** Strauss, Linda  
**Sent:** Thursday, June 22, 2017 12:51 PM  
**To:** Cleland-Hamnett, Wendy <[Cleland-Hamnett.Wendy@epa.gov](mailto:Cleland-Hamnett.Wendy@epa.gov)>; Beck, Nancy

<Beck.Nancy@epa.gov>; Morris, Jeff <Morris.Jeff@epa.gov>

Cc: Pierce, Alison <Pierce.Alison@epa.gov>

Subject: FW: ORD + OCSPP ACTION: ABC Darwin re: PFAS

#2 was assigned to OCSPP. OK to go?

**1. How would you describe the link (if any) between PFAS and human health risks/disease?**

**[Previous OW response]** EPA's health advisories are based on the best available peer-reviewed studies of the effects of PFOA and PFOS on laboratory animals (rats and mice) and were also informed by epidemiological studies of human populations that have been exposed to perfluoroalkyl substances (PFASs). These studies indicate that exposure to PFOA and PFOS over certain levels may result in adverse health effects, including developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations), cancer (e.g., testicular, kidney), liver effects (e.g., tissue damage), immune effects (e.g., antibody production and immunity), thyroid effects and other effects (e.g., cholesterol changes). To learn more about the underlying studies for the health advisories, see EPA's Health Effects Support Documents (U.S. EPA 2016) for PFOA and PFOS.

**2. OSCPP lead: What are EPA recommendations around the continued use of PFAS chemicals in firefighting foam (for example at airports)**

Aqueous film form foam (AFFF) that contain PFAS chemicals are typically used to extinguish highly flammable or combustible liquid Class B fires, such as fires involving gas tankers and oil refineries. The biggest users of AFFF are in the U.S. military, petrochemical, and aviation industries. While the majority of AFFF is being manufactured using primarily telomer-based short-chain PFAS substances, there is continued use of existing stocks of products which contain long-chain chemicals. In addition, a few companies continue to manufacture (including import) AFFF with long-chain PFAS chemicals.

PFAS chemicals are persistent and can contaminate groundwater. EPA encourages the use of training foams that are available which simulate AFFF without containing PFAS chemicals, and restricting AFFF use for emergencies only, as the Air Force has done. In addition, when AFFF is used, it is a good idea to ~~to treat the response scene as a hazardous site,~~ and remove and destroy foam residue before contamination can occur. ~~as the Air Force has done.~~

**Reporter: Nadia Daly**  
**Outlet ABC Darwin (Australia)**  
**DDL: 6/22, 3 p.m.**

**Request:**

I am looking to build a complete, nuanced picture of how PFAS is understood in the international scientific community. Here are my questions

1. How would you describe the link (if any) between PFAS and human health risks/disease?
2. What are EPA recommendations around the continued use of PFAS chemicals in firefighting foam (for example at airports)
3. How are the Australian guidelines different to those of the US EPA and are the Australian guidelines comprehensive enough and considered sufficient by the international scientific community?

([http://www.health.gov.au/internet/main/publishing.nsf/Content/2200FE086D480353CA2580C900817CDC/\\$File/fs-Health-Based-Guidance-Values.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/2200FE086D480353CA2580C900817CDC/$File/fs-Health-Based-Guidance-Values.pdf) and [http://www.health.gov.au/internet/main/publishing.nsf/Content/2200FE086D480353CA2580C900817CDC/\\$File/Consolidated-report-perflourinated-chemicals-food.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/2200FE086D480353CA2580C900817CDC/$File/Consolidated-report-perflourinated-chemicals-food.pdf))

4. The Australian Department of Health states “There is currently no consistent evidence that exposure to PFOS and PFOA causes adverse human health effects.” ([http://www.health.gov.au/internet/main/publishing.nsf/content/A12B57E41EC9F326CA257BF0001F9E7D/\\$File/PFAS-guidance-statement-15June2016.pdf](http://www.health.gov.au/internet/main/publishing.nsf/content/A12B57E41EC9F326CA257BF0001F9E7D/$File/PFAS-guidance-statement-15June2016.pdf))

However this appears to be a slightly different to what the EPA has found in its research. What is your view on that?